

ART. XI. THE BIRTH OF HABITAT BIRD GROUPS,

REMINISCENCES WRITTEN IN HIS NINETY-FIFTH YEAR,

BY FREDERIC S. WEBSTER

PREPARATOR-IN-CHIEF, CARNEGIE MUSEUM, 1897-1908

(PLATES I-XI)

INTRODUCTORY NOTE

The beautiful habitat groups of the great natural history museums of today are the result of much pioneering and of long development. The following account by Frederic S. Webster tells of his own early concepts and experiments which resulted in his construction of what well may be considered the first forerunners of the present museum masterpieces of wildlife in its native environment. The ranking bird taxidermist of his time, Mr. Webster, as early as 1869, had produced and sold stereoscopic pictures of realistic groups of birds and small mammals which he had mounted amongst lifelike accessories from the field and forest. To enhance the realism of his stereoscopes he conceived and used flat and later semicircular painted backgrounds. The group of three African flamingos, "The Flamingo at Home," mounted by him in 1880, and still on exhibition in the Milwaukee Public Museum, is known as the pioneer bird group of America.

Mr. Webster devised and gave to bird taxidermists the still-used excelsior egg-shaped manikin body, an idea that William T. Hornaday, with the addition of a soft clay covering, later adapted to the mounting of large mammals and which continued in use until Carl Akeley evolved his hollow papier-mâché form. One of Mr. Webster's early preparations was a mounted skin and an articulated skeleton from the same individual, the first specimens thus treated being an American Jabiru for Harvard and an Humbolt's monkey for the National Museum.

For twelve years he was chief preparator of Carnegie Museum and later ornithologist for the City of Pittsburgh. I was one of those who came to know and admire him and his skillful preparations when he was with the Carnegie Museum. In 1901, he and Mr. James C. Rea and I made a memorable visit to Europe. The Carnegie's Scotch Grouse and African Hornbill groups were resultants of this trip.

The following account written by Mr. Webster, who is still a dynamic worker in his ninety-sixth year, reminisces of his early days, ideas, and struggles. (Childs Frick)

Nature is always very real and most everything else artificial and more or less meaningless. Life, with all its romance, comedy, and tragedy, is but a fleeting spirit that climbs in the window and then tiptoes out the backdoor.

In the late evening of my ninety-fifth year, as an inspiration to others who have to make their battle, I would venture to tell of the contrasts of the early morning of my youth. It is not altogether a simple undertaking in the twilight. Governed by the statute of limitations it calls for speed, good will and an active memory. Every person connected with this tale and millions more now are dead.

NEW YORK JUST AFTER THE CIVIL WAR

The atmospheric and environmental influences, imbibed at the time of which I am writing, were strange, disturbing and tragic in the extreme. The Civil War of 1860 to 1865 had just closed. The martyred Lincoln had been assassinated by John Wilkes Booth, the actor, who was being hunted with a vengeance, hither and yon. The first Memorial had been observed. The parade of wagons filled with flowers of every description passed down Broadway by the street where I was employed. There were no bands, everything was as deeply silent as death itself.

Charles Darwin had written his "ANIMALS AND PLANTS UNDER DOMESTICATION" and a little later, his "ORIGIN OF SPECIES" that had set people wondering if he would be jailed. The puritan spirit, lost in the mists of modern teaching, was still a strong factor to keep people steadfast to principle.

It is unfortunate that the personal pronoun "I" has to appear so frequently, but as this is a personal effusion it cannot be avoided. In 1867 I had left a law office, to be employed as a bank runner and mailing clerk in the wholesale drygoods firm of William I. Peake & Company, a vigorous rival of H. B. Claflin & Co., A. T. Stewart & Co., and George Bliss & Co. The sales of the Peake house for one year amounted to eight millions of dollars. I banked a large portion of that enormous sum and in addition drew seven thousand and five hundred dollars every two weeks to meet the payroll for the many employees. Many nights during the fall and winter I worked so late that no cars of the three existing horse-car lines were running and I had to walk the three miles home. After serving for three years, for six days in the week from eleven to twelve hours daily, I broke down completely and was compelled to give up my ten dollar a week position.

At that time there were no trolley cars, no elevated railroads, no subways, no telephones, and no electric lighting. Electricity was a "wild dream" and in no way utilized. The city had gas-lamp posts standing at street corners, but only in the better sections. Two of these lamps I lit while delivering the evening newspaper during the first summer of the war.

Snow lay in the streets until it melted. If permitted to lay now as it did then, the perils of life in big cities would soon reduce them to half their population. Central Park was very far away and in the spring and winter, when there was skating, the Third and Eighth Avenue car lines announced the fact by flying a good-sized muslin flag, with a big red ball painted in the center, from a staff on the top of the cars. There were no motion pictures and no radio. The adorable peanut alone filled the yawning maw. Barnum's Museum on the corner of Broadway and Ann Street was the one place where the "upper ten and the lower twenty" could meet and mingle with equanimity. There was no football, but there was baseball far away on the Elysian Fields in Weehawken, N. J., near the monument marking the place where Alexander Hamilton, the revolutionary patriot, was shot in a duel with Aaron Burr in 1804.

Everything was based on horse power, the friend which carried mankind up on its stormy way and as its reward has been the most abused creature that ever existed. There was no Humane Society. Mr. Berg had not come into the picture to end abuse of the faithful animal. Keep in mind that the picture being painted is principally centered in New York City. The Indian tribes and the buffalo were supreme beyond Chicago; Los Angeles was a scattered hamlet where men won their spurs on horseback with a gun.

In those days colored people were not permitted to ride on street cars except for two cars of the Sixth Avenue line. These cars had a foot-wide white panel above the windows, running the entire length of the car, on which was painted in large black block letters, "Colored People Allowed On This Car." These same cars were literally torn to pieces and thrown into the gutters by rioting mobs during the draft riots.

The sons of the Emerald Isle were the chief laborers and many "ads" for service in the newspapers of the day had in smaller lettering at the bottom "No Irish need apply." Tammany Hall was organized by this powerful working group and constitutes the Democratic Party of this day. They were fighters. The old "69th" regiment made a great name in the Civil War and a lasting record for the nation.

There were no steam fire-engines and property often was left to burn because the man-powered fire truck could not get there fast enough. These trucks were pulled by a long double rope which could be unwound as men and boys, gathered along the way, volunteered to help. The two tall fire-tower bells rang out only the ward where the fire was located so the fire had to have a good start and to be bright enough to show where

it was located. While the "Old Hickory Engine Truck" was identified with the Irish Democrats, the "Chelsea Hook and Ladder Company" was composed of Republican aristocrats. The chief object of both crews was to see who could get to the fire first. When both arrived together, a high powered fist fight usually took place while they left the fire to crack on and gut the building, to the joy of the hilarious rabble that swarmed the street and carried off the contents. If a fire started in a block of houses having party walls, usually three houses were wrecked.

FIRST HABITAT GROUPS

The American Museum of Natural History was non-existent, except as a society of natural history of which the first Theodore Roosevelt was Secretary. This society had a modest collection in the Old Arsenal building in Central Park.

When I left the William I. Peake Company in 1867, something had to be done to restore my wasted strength which had been greatly impaired under the conditions over which I had had little, if any, control. It was the great out-of-doors that I needed and wanted. I went to Troy, N. Y., to visit my aunts and cousins, some of whom I had never seen. There I came to know that to which I desired to devote my life; namely to reproducing truthfully the beauty of nature, and the future became very definite as far as I could see and feel at the time.

In Troy I was received by the family of my cousin, Frederic A. Lester, with wide-open arms, and for nine too-fast fleeting years Fred and I roamed the countryside with our old pointer "Sport." For a few years we hunted and fished so much that we earned the disapproval of our relatives for loafing away so much valuable time. It was in this home in 1868 that I first conceived the idea of museum "habitat" groups. My interest had first been caught and my imagination stirred by a few small birds which my cousin had mounted. Fred eventually took up the study of law while I continued in my plenary purpose. My only encouragement came from my cousin's sister who inspired me to keep on toiling. In the end I managed to develop a nice "nest egg" through my skill and artistic preparations.

Owing to my consummatory feelings for nature in every respect, the deep magic proceeding from the voices of the birds, the swish of the sea, the moaning of the forest, the crashing of the lightning, and the growing realization of the spirit and power of an omnipotent force, it was not difficult for me to appreciate the high value and stirring appeal that



Group of the Least Bittern, assembled around 1870 by Webster and photographed then by him on wet collodion plates for his stereoscopic pictures. Reproduced from a colored enlargement made from the original plate.
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habitat groups would bring to the museums of a great city, and the forceful and stimulating educational factor that they might become to city toilers cut off from nature and the out-of-doors.

Through stereoscopic picture cards of animate life which I began to produce for school and family use, it was not very long before I had made a reputation and secured many admirers. One of these was the Hon. George B. Warren, an early friend of Audubon. He had wealth, influence, a fine collection of mounted birds, and a splendid library. Among its volumes those of Audubon particularly fascinated me. I was the only person permitted to remove one of those volumes from his large stone dwelling and keep it until I was through with it. For six years I was never without a bird book to refer to. Mr. Warren was past seventy and my youthful enthusiasm in the direction in which he was interested afforded him endless pleasure. Many an oyster roast had we, in his parlor-like kitchen, while discussing birds and nature to our heart's delight. He had the only specimen of the extinct Labrador Duck I ever saw outside of the American Museum of Natural History.

As time went on, and in spite of many difficulties such as the lack of good health, a proper place in which to work, and the absence of proper materials, long hard efforts resulted in the accomplishment of my ambition. My "sets" often took from six to eight feet of space. All green materials were gathered on Saturday before the Sunday on which the group had to be reassembled and photographed. The natural materials, regardless of size, were collected whenever possible near the spot where the birds had been shot. The work had to be done in the summer when there was a certainty of a suitable light streaming into all parts of the various sets. These were arranged in my studio gallery beneath the glass skylight on the top of a four story building. A large water pan that had to be made for the group of the Great Northern Diver gave me endless trouble. All the cumbersome impedimenta had to be gauged and measured before cutting. Electric elevators were not then known. There was a narrow winding stair, having a narrow tread and a high rise, which with sprawling branches and easily injured leaves and other green accessories "was something to negotiate." When the "set" was ready to be photographed, if the sunlight failed it was "just too bad," as payment for the use of the gallery was expected to be met just the same. This very unpleasant experience happened in the case of the Great Northern Diver, the Pileated Woodpecker and the Black-crowned Night Heron. A few of the smaller "sets" also resulted in many difficulties. But I did it all

single handed, ever striving to be true to nature and to attain perfection.

While "dwelling on the mountain tops" and making these group-sets for my stereoscopic pictures, some of which are here illustrated, a friend of the editor of the "Troy Times" called the attention of George B. Sennett of Erie, Pa., to my pictures. They told their own story to Mr. Sennett, who was arranging for a collecting trip to the lower Rio Grande and to Mexico, and he induced me to accompany him with expenses paid but without salary. This was in March 1877—68 years ago (1945). On returning from the Rio Grande border in May, 1877, I stopped for several weeks at Erie, Pa., to mount certain birds for Mr. Sennett's extensive cabinet and to arrange his collection of birds and other specimens. Later, when I was connected with that institution, he donated all his collections to the Carnegie Museum of Pittsburgh. Shortly after returning to Troy, N. Y., Mr. Sennett wrote me asking why I did not write and send some of my 'scope pictures to Ward's Natural Science Establishment at Rochester, N. Y. I had never heard of the latter and had no more idea of what it was like than I had of Timbucktoo. But I did write and send a set of twenty-four of my best colored 'scopes. They were water-color tinted. I had a sharp sense of coloring, as good as my sense of form that has remained with me up to this very day.

WORK AT WARD'S NATURAL SCIENCE ESTABLISHMENT

To my great surprise and even greater satisfaction, three days later, I received a complimentary letter in reply from dear old Professor Henry A. Ward closing with the words, "You may come on at once!" He said that the pictures impressed him more than any others he had ever seen of mounted birds. That was not surprising to me for with my method I was able to make the birds lifelike, frequently an impossibility with the old French wiring method, known as "stuffing."

I did not go to Ward's to acquire a reputation as a taxidermist. That I already had and I was recognized as having ability of an advanced type. Otherwise Prof. Ward would never have sent me the message to hurry on to Rochester and added me to his celebrated staff of fifteen experts, the best the world could produce. Up to that time specimens had been prepared by being stuffed—the larger mammals with straw and the smaller with chopped tow and flax, the stuffing being inserted in the sewn-up skin with "pushers." For birds there was a wire for each wing and for each leg, which was twisted around a central wire sharpened at both ends, one end of which was pushed through the tow-filled skull, and the other

through the tail bones. The central wire had two loops at proper distances through which the wing and leg wires were passed and twisted. You will readily see that by the time these wires were placed and twisted, the tender skin was apt to be out of shape and if not torn it was well weakened and

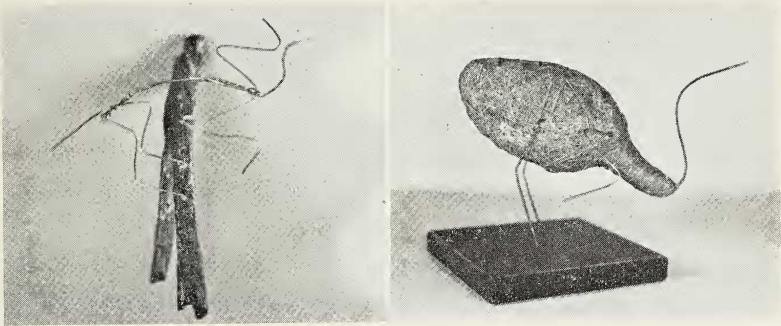


FIG. 1. Left, wire frame on perch, illustrating the old so-called French method, previously in vogue for stuffing birds with a soft filling. Right, excelsior manikin body, devised and first applied by Webster while at Ward's, for use in mounting birds of all sizes.

These methods were first described in print in a "Paper on the placing and winding of birds' feathers, by Frederic S. Webster. With cuts showing good and bad methods." Rochester, N. Y., 8 pages, 1 plate with 5 figures, F. A. Lucas, del. No date, but believed to be 1881.

its feathers mauled. It was no longer the skin of a smooth, sleek bird if indeed it hadn't come close to the point of discard.

To avoid the complications of the old wire frame method, I devised an excelsior body which would enable any preparator to produce a very satisfactory semblance of the original bird even though the skin might be in holes or ripped into a dozen pieces. I have deliberately cut up many skins in order to make a mount and save the bird. Quite a number of wonderful birds of paradise now in the Harvard Museum had to be so treated because the New Guinea natives had dried the skins with hot sand in order to cure them in that humid climate.

In truth, a very good bird mount can be made feather by feather as the curve of every shaft indicates its proper anchorage. The body feathers of nearly all land birds are in strips or narrow rows; one row along each side, one down the center of the back which curves to right and left to meet the rows on the sides, and the neck and belly feathers directly down or up to meet those of the sides.

I soon had everything ready to take my departure and enter upon a business allegiance in a new field of action and service, one which would bring many complications but which in so many ways would be much to my liking and would lead to the happiness of two persons instead of one. I said "adieu" to the loved and devoted folks and to the cherished hospitable home where early triumphs had been won. But alas!

I arrived at Rochester by train at 6:30 o'clock one December morning in the midst of an all-night snowstorm. No cars were running, the streets were deserted and I had to find my way, wading through knee-high snowdrifts for three miles to my destination, Ward's Museum. Unknowingly I passed the cottage-house where the lady lived who later was to become my devoted wedded companion for sixty-five eventful years and who has just passed on at the astonishing age of one hundred years. I found the Wizard of Ward's hard at work in his crowded sanctum. He looked at me, a well groomed lad of twenty-eight, in profound astonishment. I was never to see Professor Ward more ill at ease. The work that I had accomplished and the pictures which I had sent him, had given him the impression that I was a more mature man and for some reason a rough fellow into the bargain. From that moment the Professor seemed to think that I was equal to anything and never hesitated to "pile it on," giving me any sort of a task that no other preparator had ever undertaken, no matter how difficult it might be. I was greatly pleased and always tried my hardest.

I secured a room in a boarding house in the vicinity with a college sophomore who was employed off and on in the establishment and who later studied with Huxley. After a much needed meal I returned to the Professor's office and was taken down to the tangle of the seven shops and laboratories, all of them nearly buried in snow. With some difficulty we entered an unplastered two-storied building that was cold and damp in spite of its "big-bellied" and red-hot coal-burning stove. The three windows, two on one side and one at the front end beside the door, were blanketed with frost. Wet straw littered the floor and filled the place with a pungent stable-like odor. Nothing could have been more forbidding or discouraging than those surroundings. In the center, surrounded by more straw, stood the partly-mounted famous Civil War horse, "Winchester," of General Philip Sheridan. Martens, a taxidermist from Hamburg, Germany, was doing a very creditable job. The method for mounting large mammals in the latter part of the last century was of course crude and had iron-bound limitations. I recalled that cold

December night in 1867 at the old Winter Garden Theater on Broadway, New York, opposite Bond Street, when I heard the immortal tragedian, Edwin Booth, speak those sea-deep lines, "To be or not to be, that is the question" and, as I stood looking at that distressful black horse of General Philip Sheridan, I could not refrain from coining "To think or not to think, that is the question!"

I buttressed my courage as Professor Ward led the way up an open stairway to a better lighted room where a French taxidermist, one of the best men in Europe on birds, was trying to shape a forlorn skin. He sat dazed at the sudden appearance of his "master" with a guest. As we went into a back room we passed a big pile of the most amazing bird skins. I had never dreamed such things existed, Resplendent Trogons, Birds of Paradise, Impeyan, Tragopan and Peacock Pheasants, Scarlet and Bronze Ibises, and innumerable smaller birds from many foreign lands. The mass was piled on the floor and covered the space of an old-time feather-bed. Wings and heads were dangling and legs were missing. The specimens, perhaps two hundred in number, must have cost a large sum. The French taxidermist had tried to mount some of those wonderful birds but had finally decided they were "too far gone." Foreign birds are frequently very difficult to save and prepare because of the climatic and other conditions under which they were collected. These were unmountable only because the man did not have the proper method to apply.

I was fascinated by the enchanting display of a phase of nature of which I was totally unaware and as Professor Ward was moving away I begged him to wait a moment until I could gauge the extent of the damage. Now I have always believed he had not the slightest idea that it was possible for anyone to do what his expert Frenchman could not do and that he was annoyed that I wished to delay over that pile which had been such a grief to him. Nothing was said for a few moments by either of us as I carefully smoothed this skin and that skin with immediate and magical effect. Then suddenly he asked me in a frosty tone, "You haven't any idea *you* can mount those skins?" Not inclined to have my ability questioned I replied simply and very emphatically, "I certainly can!" "Well then," he said, "that's your particular job and begin as soon as possible!" So I started in on those discarded bird skins and in the course of time all but a mere remnant were finely mounted and sent to the Museum of Comparative Zoölogy at Harvard University.

In those days there were no real natural history museums in the sense of today. Institutions of learning had small collections for reference and

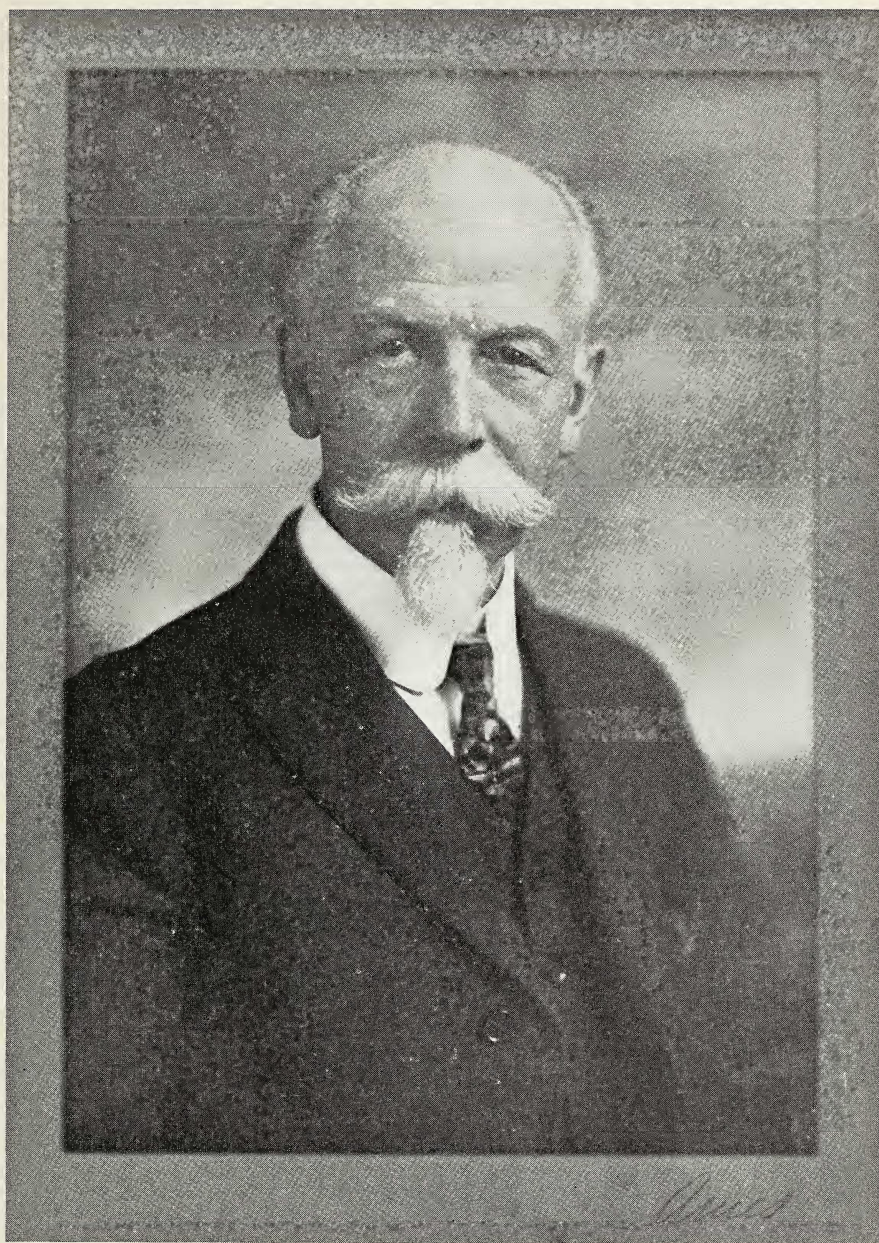
study for the student body, but not for the general public. Professor Henry A. Ward was the first to launch the natural history museum as a public educational factor. He was a geologist by profession and taught that science in the old Rochester University. His scientific establishment was located on a short street, College Avenue, just back of the University. He had a broad vision and used the resources of the rich Ward family to support his magical undertaking. He loved to venture into things considered hazardous. He was one of the world's greatest travelers. Stanley followed his trail in Africa and through the experience of both men Livingstone was located and brought back to civilization.

Ward retained a big staff of workers, all specialists, and gradually was inducing the heads of the larger universities to expand their modest collections of zoological and geological material. It was a herculean undertaking, but he was undaunted and successful beyond expectation. It was not, nor is it today, fully appreciated how much my own humble efforts accelerated the growth and improvement of the work at Ward's and of the resulting museum collections.

Much of my time when I first went to Rochester was devoted to the preparation of material required for the Harvard University Museum. This museum was a memorial to Professor Jean Louis Adolphe Agassiz and was financed by his son, Alexander Agassiz. Dr. J. A. Allen was the Curator.

Amherst University has a hundred American birds I mounted, which originally formed part of Audubon's collection. Mary Audubon sold or gave them to Prof. Ward about the time of my arrival at Rochester. The skins were but a little less than a century old, and before they came into my hands had been considered unmountable. They were largely of water birds and there was much caked fat and many stains which had to be removed.

I had not been at Ward's very long before William T. Hornaday returned from India where he had been collecting animal skins and skeletons principally for the Harvard Museum. We were of about the same age, had similar inclinations, and formed a firm friendship from the very start. He saw what I was doing and had done, and we got our crusading minds together and planned and organized the Society of American Taxidermists. Of this I was President, Hornaday, later to become Director of the New York Zoological Park, was Secretary, and Frederick A. Lucas, later Director of the American Museum of Natural History of New York, was Treasurer.



Photograph of Frederic S. Webster taken in New York in 1918 by the Ames Studio.
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EXHIBITIONS OF THE SOCIETY OF AMERICAN TAXIDERMISTS

The Society held three interesting and important exhibitions of animal preparations.* The first was held at Rochester, N. Y., in 1880, the second at Boston, Mass., in the following year, and the third in New York in 1883. The last one was under the patronage of Mr. Andrew Carnegie and expenses were borne by him. All three exhibitions had especially prepared displays and these showed a marked improvement each year. Prof. Ward had no particular interest in the various expositions and attended only the one held in Rochester. He did, however, lend Mr. Hornaday's Orang-utan group which had been prepared by the latter while he was on his regular salary.

When I informed Professor Ward that I desired to prepare a group of flamingos for the Exposition he met me with, "Where are you going to get the birds?" "Why, Professor! You have several of them!", I reminded him. "Ho-ho! that's it, is it? Well, you will have to interest me more than I am at the present moment." I had already made a pretentious group of that strange combination of mammal and bird, the Ornithorhynchus or Duck-billed Platypus that lays eggs and suckles its young. Prof. Ward's flamingos were the large African species, *Phoenicopterus antiquorum*, in some respects more beautiful than any other form in their rich pink tints which contrast with the chalk-like white of the rest of the body and the faint rose flush of the long neck. I ventured to ask, "Will you sell me the skins I need—as they are?" "Yes," he said, "I will do that." I immediately paid him the long price of seventy-five dollars for the three fine skins and was happy to have the project fairly launched. The next day to my great surprise he came in to inquire if I had gotten the specimens and as to how

*Regarding the exhibitions held by the Society of American Taxidermists, in an article entitled "Masterpieces of American Taxidermy," which appeared in Scribner's Magazine for July, 1922, W. T. Hornaday wrote, "Three very systematic competitive exhibitions were held. The first was at Rochester, in December, 1880; the second at Boston, in December, 1881; and the third (and last) took its place in history at Lyric Hall, New York, April 30 to May 5, 1883. . . . As one-half the expenses of the New York show, a 'model millionaire' gave the generous and sorely needed sum of five hundred dollars. So far as the writer knows, that was Andrew Carnegie's very first gift to museology. And more than that, Mr. Carnegie actually permitted the society to elect him its treasurer for the year, 1883, by which the society enjoyed the prestige of having a financial backer known to be worth the fabulous sum of fifteen million dollars! In view of subsequent occurrences in museum development, we opine that our great and good friend always regarded with satisfaction the outcome of that very hazardous venture."

I intended to assemble the birds in the group. I began telling him what I thought best to do, that I would follow Audubon's description as to the breeding habits of the American bird but that I was not disposed to have the female straddling her nest when incubating, and I went on to describe the general details of the proposed group. When I was through, he said, "I want to know how you know more about the breeding of flamingos than Audubon, and how you are going to fly in the face of such authority?" I reminded the Professor that Audubon had never seen the flamingo breeding and had secured his information from others. Common sense told me that no flamingo could strain its anatomy by resting for hours on the sternum without the support of its legs. No other long-legged bird did and why should the flamingo? He replied, "Well, if you are inclined to make a joker out of such a group I will not let you have the flamingo skins." I had to submit, or give up my dearly treasured plan. Inasmuch as I had yielded the main point of our contention I was able to make a compromise and have him grant me the use of the laboratory in which to prepare the group which I could not have done without that concession. By working overtime on Sundays and nights I was able, without assistance from any one, to complete the group on time for the showing. Prof. Ward smiled his approval.

A few days before the opening, exhibits came in faster than had been hoped for. The amateur work was much better than expected. Mr. Hornaday's "Fight in the tree-tops" showed two big male Orangs, one of them biting off the forefinger of the other. It was all too real to be pleasing to children and sensitive persons but like all gruesome things it attracted attention. Yet it caught the favor of the judges and won the Silver Medal as the best piece in the Exposition—to the surprise of most of the members. As prizes the Society offered a silver medal, a bronze medal, and a number of "diplomas." The bronze medal was bestowed on one of my smaller entries, a very appealing and beautiful Wood Duck which was considered the best mounted bird in the entire exposition and a real classic. The flamingo group was entirely passed over. I had prepared this for a very distinct purpose—to influence Prof. Ward to advance the educational value of museum exhibits by developing habitat bird groups. Up to that time, all animals for museum display were prepared as separate units. Each bird was mounted on a perch facing to the left and in the museum they were set out in the one direction in bewildering rows. Professor G. Brown Goode of the United States National Museum later introduced the systematic labeling of the specimens.

The judges left the city almost immediately after judging the exhibits, without discussing the reasons behind their findings. Dissatisfaction over their decision finally forced the secretary of our society, Mr. Hornaday, to write Prof. W. E. D. Scott, the secretary of the Committee of Judges, asking the reason why they had passed over the Flamingo Group when the chief purpose of the Exposition was to improve the interest and the quality of taxidermy in our museums. The judges' reply was printed in the Princeton press—that while the Flamingo Group showed much skill and artistic merit, the committee considered it an attempt to attain the unattainable, and that exhibits of similar character should be discouraged by scientific institutions. It was thus that these unseeing gentlemen tried to discourage my habitat group idea—the idea that has since been so superbly developed and is now hailed as a grand success by every museum in this “land of saints and sinners.”

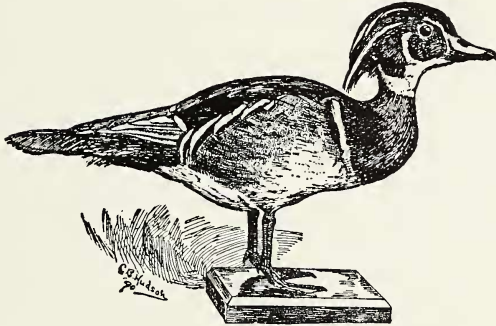


FIG. 2. Wood Duck, mounted by Webster in the conventional older style, reproduced after Hornaday. At the first exhibition of the Society of American Taxidermists held at Rochester in 1880, this single specimen won the bronze medal offered for the second best piece, winning over the new ideas exemplified by the group, “The Flamingo at Home,” shown here in plate VII.

By the time the New York exposition was over, the result was certain and too evident to be denied. I had successfully shown that *visual* natural science had come to stay. My flamingos in popularity had letters and words beaten *two* to *one*. Usually pathfinders do not survive long enough to see the benefits derived from their efforts. I thus have had and still am having the supreme satisfaction of knowing that my humble efforts at colored stereoscopic pictures of animated nature sets, away back in the '60's, and '70's, were the actual forerunners of the superb habitat groups of this day.

When I went to Ward's I had hoped to be able to prepare such groups. My previous "sets" for the "scope" pictures had to be taken down immediately after being photographed and the gallery cleared for Monday's business. The sets were as carefully put together as if they were to be permanent. Several of my twenty-four subjects had painted backgrounds, not very "killing" ones, I'll admit, but in the pictures they afforded the needed perspective and finish.

While on the subject of backgrounds, it may be of interest to record that the first time to my knowledge that a semicircular background was ever utilized, to enhance the realism of a group, was in the case of five "hunting scene" groups that we installed in the Fourth Avenue end of the old Madison Square Garden for the First Sportsman's Exposition when I was Secretary of the Association.

Earnest endeavor, hard work, and ability brought results and landed me in the forefront as a bird preparator almost overnight. For nearly ten years I toiled on without a vacation and produced for Ward's a great series of beautifully mounted birds. My revered friend of many years, William Temple Hornaday, in "Masterpieces of American Bird Taxidermy" published in Scribner's Magazine for September, 1925, tells of my services at Ward's:

"In 1878 Professor Henry A. Ward brought to his Rochester establishment a really wonderful bird taxidermist. It is inadequate to describe Mr. Frederic S. Webster by any smaller term. From 1879 to 1882 we worked side by side in the 'large museum' and I now write of what I saw.

"Even at that early time there were in America a score of men who could mount fresh birds exceedingly well, but with old and mummified 'dry skins' their limitations were many. The skill of Ward's foreign taxidermists in dried skins was strictly limited.

"But to Fred Webster ancient bird mummies had no terrors whatever. He received them with outrageous confidence, sometimes tinged with contempt, and sailed through them with a display of cheerfulness, precision and speed that was fairly amazing. His knowledge and skill never missed fire. The small skins he soaked into disreputable masses of wet feathers and bones, mounted them, fluffed them up, and wound them at the rate of from four to eight per day, just like shelling peas. With larger skins that seemed to defy human skill, he was equally successful. . . .

"Now, all this happens to be important history because of the rich fruit that it bore in our American Museums. Thanks to the open-shop spirit created by the unterrified Society of American Taxidermists, eliminating

all desire for secrecy in methods, Mr. Webster taught his processes to a long line of younger men who practiced and passed them along during the remainder of their lives. . . .”

FINIS

EDITOR'S EXPLANATION OF WEBSTER'S STEREOSCOPIC VIEWS

As has been explained in the preceding pages, Webster's first taxidermic work started at Troy, New York, about 1870, when he began to surround mounted birds with natural accessories, including plants, shrubs, tree limbs and natural rocks and earth, for the purpose of producing stereoscopic views of naturalistic habitat bird groups then in wide popular demand. Mr. Webster writes that these photographs, “were originally reproduced in stereoscopic picture cards with notes regarding the birds and their habits printed on the reverse side (see plate IV), and were sold to schools and other interested clients. The stereoscopic view, because of the third dimension, gives a charm that motion pictures do not supply.”

Most of the following plates, except where the captions plainly indicate otherwise, have been reproduced from photographs made by Webster of these original assemblages, prepared at the time indicated, for the production of his stereoscopic pictures. They were the forerunners of the modern museum habitat groups in which, however, Webster's natural accessories, trees and grass, have given way to more permanent preparations. The following half-tones have been reproduced from enlargements, made recently by Webster, from the original plates which he made in the 'seventies using the then prevalent collodion or wet process—“the only kind then used by photographers.”

In a letter of June 29, 1943, Webster wrote, “I have been trying since Christmas to finish photo prints of some of the taxidermic preparations that I was guilty of seventy-three (73) years ago. . . . They have to be done while I am doing a multiplicity of duties for my wife of sixty-three-years—now one hundred years and eight months old.”

Entered according to Act of Congress in the year 1875, by Frederic S. Webster, in the Office of the Librarian of Congress, at Washington.

STEREOSCOPIC VIEWS OF ANIMATED NATURE. WILSON'S, or ENGLISH SNIPE.

Class II, Order VI, Grallatores, Family Scolopacidae.
Wilson's Snipe. Figure I, Male.

Scolopax gallinago, Wilson's Am. Orn., VI. (1812) 18.
Scolopax Wilsoni, Aud. Orn. Biog., III. (1835) 322; V. (1839) 583.

DESCRIPTION.

The Wilson Snipe is about 10.1-2 to 11 inches in length, wing 5, tail 2 1-4, bill 2 1-2; tarsus, 1.1-1 inch. Bill long, compressed, flattened and slightly expanded towards the tip, punctuated in its terminal half; wings rather long; legs moderate; tail short; entire upper parts brownish-black; every feather spotted and widely edged with light-rufous, yellowish-brown, or ashy-white, according to age of bird. Back and rump transversely barred and spotted with the same; a line from the base of the bill over the top of the head; throat and neck before, dull reddish-ashy; wing feathers marked with dull brownish-black; other under parts white, with transverse bars of brownish-black on the sides; outer edge of first primary white; tail glossy brownish-black, widely tipped with bright-rufous, paler at the tip, and with a subterminal narrow band of black; outer feathers of tail pale, frequently nearly white, and barred with black throughout their length; bill brown, yellowish at base, and darker towards the end; legs dark brown; iris hazel; tail consisting of sixteen feathers. The female differs in being more obscure in her colors; the white on the back being less pure, and the black not so deep.

The English Snipe is equally well known, and as great a favorite with sportsmen, as the Woodcock. There is no game-bird so widely distributed over the whole world as the present species. They are found in all countries, from the extreme points of Siberia, to the uttermost limits of the south. The West India Islands, as well as Ceylon, and Japan, are annually visited by this fowl, while the rice plantations of the Carolinas, and the fertile meadows of Egypt alike swarm with their multitudes. Snipes are equally esteemed in all parts of the world where they inhabit, and the richness and delicacy of their flesh may be considered as second alone to that of the Woodcock. The Snipe arrives from the South at about the same time as the Woodcock, and has many of the habits and characteristics of the latter bird. It is found in the Eastern and Middle States only as a spring and autumn visitor, and then passing to higher latitudes to breed. In the spring, while with us, it appears to be pairing, and although associating in small detached flocks, they are most often found in pairs by themselves. It is during this season that the male performs his well-known gyrations in the air. The Snipe lies close to the ground when approached, and being a bird of strong scent, is wounded at a considerable distance by a good dog. The Snipe like the Woodcock, probes in the soft earth for worms and animalcules, which it feeds upon. After its return to us in the autumn, it remains with us until the ground is frozen in the meadows, when it moves to the Southern States, where it passes the winter. The male bird figured, was shot on the 16th day of December, 1874, when the thermometer was nine degrees below zero. The locality was a piece of marshy ground, and at certain places not frozen, being watered from a number of springs near by. The above will at once be seen is a very rare case, as well as an extremely unusual circumstance.

Send Orders to F. S. Webster, Naturalist and Taxidermist, Troy, N. Y.

FIG. 1. Reverse; for other side of this view, see plate opposite.

Entered according to Act of Congress in the year 1876, by Frederic S. Webster, in the Office of the Librarian of Congress, at Washington.

STEREOSCOPIC VIEWS OF ANIMATED NATURE. AMERICAN WOODCOCK.

Class II, Order VI, Grallatores, Family Scolopacidae.
Figures I, and II, Females. Figure III, Male.

Scolopax minor, Aud. Orn. Biog. III. (1835) 470.
" Wilson, Am. Orn., VI. (1812) 20.

DESCRIPTION.

Length, about eleven inches; wing, five and a quarter; tail, two and a quarter; Bill 2 1-4; tarsus, one and a quarter. Bill long, compressed, punctuated and corrugated near the end; upper mandible longer than the under, and fitted to it at the tip, wings moderate; tail short; head large, somewhat triangular; eyes fixed high on the head, and a remarkable distance from the bill; occiput with three transverse bands of black, alternating with three others of pale yellowish-rufous; upper parts of the body variegated with pale-ashy, or yellowish red of various shades and black; large space in front of throat, reddish-ashy; line from the eye to the bill, and another on the neck below the eye, brownish black; entire under parts pale rufous, brighter on the sides and under wing coverts; quills ashy brown; tail feathers brownish black, tipped with ashy, darker on the upper surface, and of a silvery white on the under; legs and feet a pale reddish flesh color, iris dark brown. The female is considerably larger, and also differs in having the bill very near three inches in length, and the black of the back is not so intense. Weight from five to eight ounces, and even higher, sometimes as high as ten, and even eleven ounces. The Woodcock is mainly nocturnal in its habits, seldom taking wing in the full light of the day unless disturbed. It walks about, however, and feeds by day as well as by night. Its food is mainly earth-worms, of which it swallows as many in a day as would equal its own weight; and hence its favorite resorts are where it can obtain these worms in abundance. The moist grounds which these birds frequent are perfectly filled with "bill-holes," which they have made in probing for worms, and these holes become a guide to the hunter, who looks at their frequency, and freshness, when he would find good shooting. When flushed by the hunter, or the dog, the Woodcock, ordinarily flies but a short distance, plunging into a clump of bushes or thicket near by, or a thicker part of the swamp. It spends the winter in warm climates, but breeds from the Carolinas to Nova Scotia. The nest, made of dead leaves and grass, is placed under a bush, or beside a fallen trunk. In three or four weeks from the time the young are hatched they are able to fly; and when six weeks old, they fly almost as well as the old ones. In the latter part of July, and during the month of August, while the birds are moulting, they retire to the most secluded localities; and it is difficult to find them at that season. In September, during the continuance of dry weather, they frequent cornfields and ditches; and have been seen searching for worms in the mud in sink-pools, within a few yards of a house. At the latter part of September, and during October, they are in their prime, and it is at this season that they afford the most delightful pleasure to the sportsman.

Send Orders to F. S. Webster, Naturalist and Taxidermist, Troy, N. Y.

FIG. 2. Reverse; for obverse, see plate opposite.

EXAMPLES OF WEBSTER'S STEREOSCOPIC PICTURES

Reduced; the original captions measure $6\frac{3}{8}$ inches in width, and $2\frac{3}{4}$ inches in height, between the crenulated lines.

The production of such stereoscopic views was the motive for the preparation of these early habitat bird groups.



FIG. 1. Wilson's Snipe; front, for reverse, see opposite.

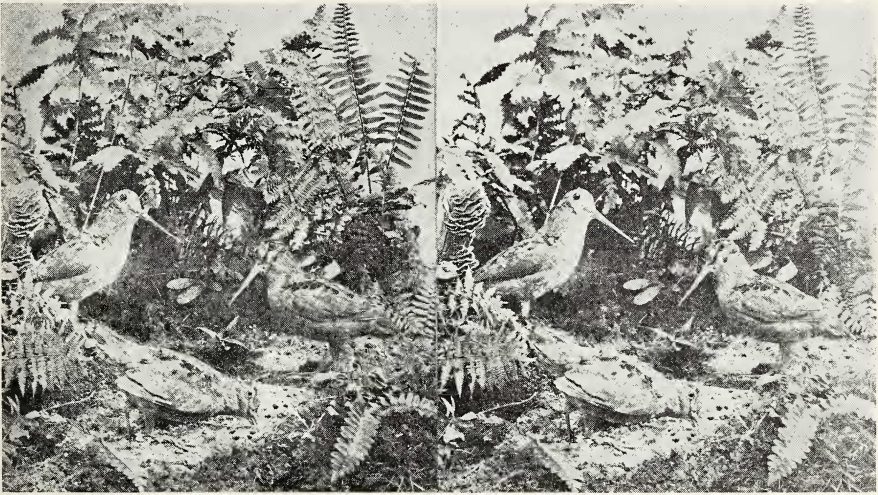


FIG. 2. American Woodcock; obverse, for reverse, see opposite.

EXAMPLES OF WEBSTER'S STEREOSCOPIC VIEWS

The complete collection included twenty-four pictures, some of which were hand-colored.

EXPLANATION OF PLATE V

From his memory, seventy-three years later, on June 29, 1943, Webster wrote a description of the group of Black-crowned Night Herons, which appears opposite this page. His account follows: "I collected the herons on a rocky island in the Hudson River just below the town of Mechanicsville. There was a large rookery there every year for many years. At the time of breeding, April, the island was safe from invasion as the river tumbled wildly over the ragged rocky bottom, and access was dangerous in the extreme. It was a sure hazzard if ventured in a weak skiff. Three visits had to be made in order to get the material for the group which was 6 x 9 feet. It had to be set up in the photographic gallery on Sunday, when the latter was not used for commercial purposes.

"To climb those tall oak trees, get the nests and cut out the clumsy limbs, and transport them down the Hudson River to Troy, was a stunt that no one but a determined youth would think of undertaking, and for no compensation other than ridicule from your family and near friends. I had to mount the birds at home and place them on the limbs, then remove them when taken to the gallery. Speed, care, skill, and enthusiasm did the trick. And now you have the satisfaction of seeing a very perfect reproduction of the breeding habits of the striking Black-crowned Night Heron."